Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D.C. 20554

ORIGINAL

In	the	Mat	ter	of				
		Lopme						5
		age :						
Use	e of	New	Te]	Leco	ommur	nica	ıtioı	າຮ
Tec	chno.	logie	es					

ET Docket No. 92-9 RECEIVED

APR 1 0 1992

To: The Commission

Federal Communications Commission Office of the Secretary

PETITION TO SUSPEND PROCEEDING

The Association of American Railroads ("AAR"), Large Public Power Council ("LPPC") and the American Petroleum Institute ("API") (collectively "Petitioners"), by their attorneys and pursuant to Section 1.41 of the Commission's Rules, hereby request that the Commission suspend the deadlines for submission of comments and reply comments in the above-captioned rulemaking proceeding until it fully investigates the feasibility of using federal government spectrum for emerging technologies and/or for relocating displaced users of the 2 GHz band. A suspension is warranted in light of: (1) information contained in a draft report, released in late March, 1992, by the National Telecommunications and Information Administration ("NTIA"), which shows that 230 MHz of federal government spectrum in the 2 GHz band is vastly underutilized compared to the 220 MHz of spectrum that is targeted for reallocation in this proceeding; and (2) recent Congressional interest in use of federal government spectrum in this proceeding. See, e.g., Letter from Senator Ernest F. Hollings to FCC Chairman Alfred C. Sikes, dated April 6, 1992.

> vo. of Copies rec'd ist A B C D E

I. SUMMARY

The Commission's spectrum reallocation proposal presents a Hobson's choice between (1) deployment of emerging technologies through disruption of existing spectrum users, and (2) no deployment of emerging technologies. But this choice need not be made. An opportunity exists for a win-win situation. Making underutilized federal government spectrum available will permit rapid deployment of emerging technologies without disrupting the communications systems necessary for safe and reliable operation of the railroads, electric utilities and other vital industries.

Accordingly, the Commission should hold this proceeding in abeyance until a determination is made as to the feasibility of using federal government spectrum for emerging technologies and/or for relocating displaced users of the 2 GHz band. Indeed, the Commission is required by the Administrative Procedure Act to consider this alternative. Moreover, bifurcating this proceeding to defer consideration of a proposal that will result in massive disruption of the operations of existing 2 GHz microwave licensees is highly desirable as a matter of public policy. This approach would avoid needless depletion of the time and resources of the Commission, the affected 2 GHz microwave licensees and the public and it would be in accordance with the policies of shared spectrum management between the Commission and the NTIA.

II. BACKGROUND

The Commission has proposed to displace current users of the private fixed microwave and common carrier bands comprising a total of 220 MHz in the spectrum between 1.85 and 2.20 GHz ("2

GHz")^{1/} in order to create a spectrum reserve for emerging telecommunications technologies. <u>See Notice of Proposed Rule Making</u>, FCC 92-20, released February 7, 1992 ("NPRM").^{2/} Licensees targeted for displacement include the railroads, electric utilities, petroleum and pipeline companies and other core industries that use fixed microwave systems for safety and reliability applications in their day-to-day operations.

The Commission based its proposal on a study by its Office of Engineering and Technology ("OET"), 3/ which analyzed each category of current users of the 2 GHz band, including private fixed microwave, common carrier, multipoint distribution service ("MDS") and broadcast auxiliary. For each service category, the OET study examined the number of licensees, the number of facilities or transmitters, the location of facilities, the technical operating parameters of the facilities, and the communications requirements of existing licensees. OET Report at 6.

In the NPRM, the Commission acknowledged that it did not consider federal government spectrum for an emerging technologies reserve because of "the delay and uncertainty" in reallocating spectrum under the jurisdiction of NTIA. NPRM at para. 11, n.11. To support this statement, the Commission cited the "Emerging

 $[\]underline{1}$ / The 220 MHz targeted for reallocation consist of 140 MHz at 1850-1990 MHz; 40 MHz at 2110-2150 MHz; and 40 MHz at 2160-2200 MHz.

^{2/} A summary of the NPRM was published in the Federal Register on February 19, 1992. 57 Fed. Reg. 5993.

^{3/} See "Creating New Technology Bands for Emerging Telecommunications Technology," FCC/OET TS92-1 (January 1992) ("OET Report").

Telecommunications Technologies Act," legislation currently pending in Congress that would require NTIA to reallocate federal government spectrum for emerging technologies. 4/ Id. The Commission ignored the fact that NTIA has authority to release federal government spectrum at any time without Congressional authorization and that NTIA has done so in the past when the FCC needed additional spectrum to meet commercial demand. 5/
Nevertheless, the Commission specifically invited the public to comment on how potentially available federal government spectrum could be utilized in connection with its efforts to create a spectrum reserve for emerging technologies. Id. at paras. 21, 27.

III. DISCUSSION

The Commission should immediately investigate the availability of federal government spectrum for emerging technologies. If such spectrum were to be made available, the Commission's proposal to displace current 2 GHz private fixed microwave licensees would become moot. Accordingly, the Commission should suspend procedural dates and hold this rulemaking proceeding in abeyance until: (1) it formally requests NTIA to make underutilized federal government spectrum available for emerging technologies and/or for relocating

<u>4/ See H.R. 531, 102d Cong., 1st Sess.</u> (passed July 9, 1991, by the House of Representatives) (137 Cong. Rec. H 5272 (1991)) and S. 218, 102d Cong., 1st Sess. (reported May 14, 1991, by Senate Committee on Commerce, Science and Transportation and awaiting consideration by the full Senate), S. Rep. No. 93, 102d Cong., 1st Sess. (1991).

^{5/} See Section D, infra, at pp. 12-15.

displaced 2 GHz users and receives a formal response from NTIA to that request; (2) the OET evaluates the 1710-1850 MHz and 2200-2290 MHz federal government spectrum bands using the same criteria it applied to the targeted 2 GHz band; and (3) interested parties are given an opportunity to comment on such an OET report on federal government spectrum.

A. A Recently Released NTIA Report Demonstrates the Potential Availability of the 1710-1850 and 2200-2290 MHz Government Bands

The underutilization of the 1710-1850 MHz federal government band and its potential availability for emerging technologies became apparent in late March, 1992, when NTIA released a draft report entitled "Federal Spectrum Usage of the 1710-1850 and 2200-2290 MHz Bands" ("NTIA Report"). Preliminary analysis of the NTIA Report reveals that the frequencies at 1710-1850 MHz and 2200-2290 MHz (collectively called the "Federal 2 GHz Band") are utilized far less extensively than the frequencies the Commission has targeted for reallocation in this proceeding (the "Commercial 2 GHz Band"). The majority of facilities in both the Federal and Commercial 2 GHz Bands are fixed point-to-point microwave systems and are used for similar applications. The Federal 2 GHz Band

^{6/} NTIA's Office of Spectrum Management indicated that the document released last week was a draft of a report expected to be officially released, with minor editorial changes, within six weeks. See "Federal Spectrum Usage of the 1710-1850 and 2200-2290 MHz Bands," E. Cerezo, ed., NTIA TR 92-285 (Mar. 1992) (stamped "DRAFT").

According to the NTIA Report, 4,847 of the unclassified installations in the 1710-1850 MHz Band are fixed microwave facilities, as are 308 of the unclassified installations at 2200-2290 MHz, for a total of 5,155 fixed microwave (continued...)

is used far less than the Commercial 2 GHz Band as measured by total number of facilities, utilization per bandwidth and increased use during the last 10 years.

The NTIA Report states that the Federal 2 GHz Band supports the operation of only 7,790 facilities. By comparison, the Commercial 2 GHz Band is very heavily used, supporting a total of 29,116 facilities nationwide. See Figure 1 on page 8. Thus, as measured by total number of facilities, utilization of the Federal 2 GHz Band is less than 30 percent of the utilization of the Commercial 2 GHz Band. Table 1 (below) indicates far less use of the Federal 2 GHz Band when measured on the basis of the number of facilities per unit of bandwidth, as well.

	TABLE 1	
	Commercial Band	Government Band
No. of Facilities	29,116	7,709
Amount of Bandwidth	220 MHz	230 MHz
Facility per MHz	132.3	33.5

^{1/(...}continued)
 installations. These facilities are used for the same
 purposes as their counterparts in the Commercial 2 GHz Band
 -- high speed relaying, supervisory control, load control,
 telemetering, data acquisition, land-mobile radio
 dispatching, operations and maintenance. NTIA Report at 4 1, Table 5-1 (page 2), and Table 6-1 (page 4). See also OET
 Report at Table 1.

^{8/} The facilities indicated in the NTIA Report apparently refer to only unclassified use of the Federal 2 GHz Band. OET should determine the total number of federal government facilities in its study of this band.

The comparatively light use of the Federal 2 GHz Band also is demonstrated by the growth statistics revealed in the NTIA Report. Use of the lower portion of the Federal 2 GHz Band (1710-1850 MHz) has increased by about 400 installations per year since 1978; use of the upper portion of the band (2200-2290 MHz) has increased by about 80 installations per year during the last 10 years. This growth in the use of the Federal 2 GHz Band is much less than the corresponding growth in the private sector. According to the FCC's Annual Reports from 1978-1990, private fixed microwave facilities -- the majority of which are in the Commercial 2 GHz Band -- increased from 14,382 to 32,871, for an average annual increase of 1,537, which is more than three times the average annual increase in installations in the Federal 2 GHz Band during a similar period of time.

B. The FCC's Office of Engineering and Technology Should Investigate Fully the Feasibility of Using the Federal 2 GHz Band for Emerging Technologies

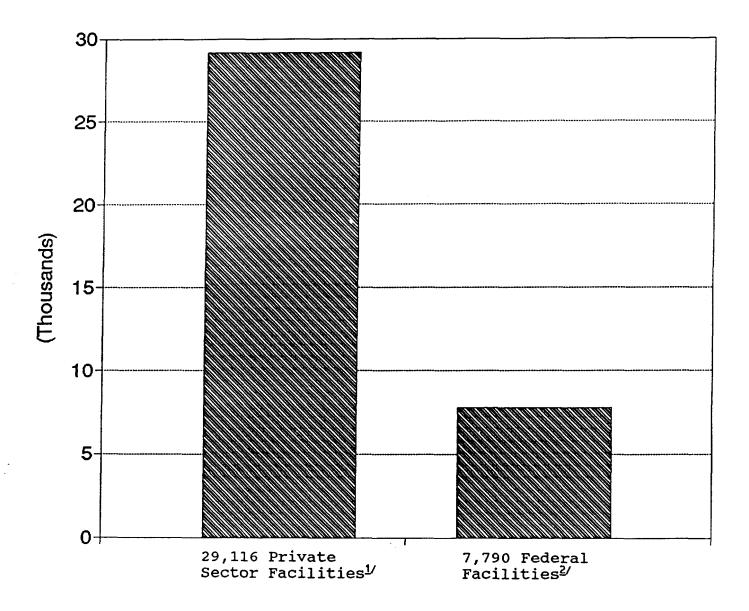
The glaring underutilization of the Federal 2 GHz Band revealed by the NTIA Report cries out for a full investigation by OET of the feasibility of using this band for emerging technologies and/or as a home for displaced users of the Commercial 2 GHz Band. As it did in its analysis of the Commercial 2 GHz Band, OET should examine the number of facilities or transmitters operating in the Federal 2 GHz Band, the location of facilities, the technical operating parameters of the facilities, and the communications requirements of existing

^{9/} NTIA Report at 4-3, 4-19.

FIGURE 1

Number of Facilities in Commercial 2 GHz Band vs.

Number of Facilities in Federal 2 GHz Band



¹/ FCC OET Study TS/92-1, Table 3 at page 19.

 $[\]underline{2}/$ NTIA Report TR 92-285 at page 2-1 (5,539 facilities at 1710-1850 MHz, and 2,170 facilities at 2200-2290 MHz).

licensees. <u>See</u> OET Report at 6. While some of this data is available in the NTIA Report, the OET staff should analyze the Federal 2 GHz Band in at least as comprehensive a manner as it analyzed the Commercial 2 GHz Band to determine the federal band's utility for a spectrum reserve. 10/

For example, OET should analyze the geographic distribution of facilities in the Federal 2 GHz Band using the same one-degree grid analysis depicted in Figure 4 on page 21 of the OET Report. Similarly, OET should analyze the distribution of facilities in the Federal 2 GHz Band in the Top 50 Metropolitan Statistical Areas using the same two-degree analysis depicted in Table 4 on page 26 of the OET Report. In addition, OET should analyze the path lengths and other technical operating parameters of the facilities in the Federal 2 GHz Band, as it did for facilities in the Commercial 2 GHz Band.

Finally, OET should analyze the technical and economic feasibility of relocating users of the Federal 2 GHz Band. See OET Report Sections 4.0 and 6.0. While the NTIA Report discusses moving certain federal government facilities to bands above 7-8

^{10/} Petitioners recommend that OET analyze the Federal 2 GHz Band in the same manner it analyzed the Commercial 2 GHz Band in order to make a meaningful comparison between the two bands regarding their potential use for emerging technologies. However, Petitioners do not thereby endorse or acquiesce in any or all of the assumptions, methodologies and calculations OET utilized in its initial study, or the conclusions it reached. Notwithstanding the recommendation to conduct a comparable study of the Federal 2 GHz Band, Petitioners explicitly reserve the right to comment on and criticize all aspects of the OET study in their formal comments, reply comments and in other pleadings in this proceeding.

GHz ¹¹/, the costs and technical considerations associated with relocation of government facilities should be analyzed employing the same methodology OET used to analyze relocation of users of the Commercial 2 GHz Band. Accordingly, OET's study should examine the cost and impact on operations of dislocating federal government users and relocating them on alternative frequencies.

OET should also fully analyze the cost and technical feasibility of moving private fixed microwave users from the Commercial 2 GHz Band to the Federal 2 GHz Band. This information will supplement OET's initial study of the impact of moving displaced users of the Commercial 2 GHz Band to the 4 and 6 GHz bands and permit an accurate comparison of all potential relocation bands for displaced 2 GHz users.

A careful and thorough analysis by OET¹²/ of the Federal 2 GHz Band will enable the public to comment on the feasibility of using that band for emerging technologies or as a home for displaced users of the Commercial 2 GHz Band. Moreover, it would be consistent with the Commission's goal, reiterated throughout the NPRM, to create a spectrum reserve in a manner that will minimize the impact on existing users. See NPRM at paras. 6, 9, 27. 13/ Obviously, making underutilized government spectrum

^{11/} NTIA Report at A-5.

^{12/} As discussed, the NTIA Report provides only the starting point for an analysis of the Federal 2 GHz Band comparable to OET's study of the Commercial 2 GHz Band. The OET's expert technical staff, computer programs and spectrum data base make it uniquely qualified to perform the appropriate analysis of the Federal 2 GHz Band.

^{13/} Holding this proceeding in abeyance to determine the availability of federal government spectrum also is (continued...)

available as a home for emerging technologies would effectively eliminate the impact on existing 2 GHz users because they would not have to be displaced as currently proposed. 14/

C. The FCC Is Required to Consider the Alternative of Using Federal Government Frequencies

The FCC's failure to investigate fully the feasibility of using federal government spectrum for emerging technologies or as a new home for displaced 2 GHz users could render the entire rulemaking proceeding unlawful under the Administrative Procedure Act ("APA"). 15/ The APA directs that agency action shall be deemed unlawful if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 16/ To

consistent with the President's moratorium on agency promulgation of new regulations that impose unnecessary burdens on business and consumers. <u>See</u> Memorandum from President Bush, dated January 28, 1992, regarding "Reducing the Burden of Government Regulations." Although the FCC, an independent agency, is not bound by the moratorium, the FCC's Office of General Counsel has indicated that it will voluntarily comply with the President's directive. Utilizing the Federal 2 GHz Band as a spectrum reserve would permit society to enjoy the benefits from deployment of emerging technologies without imposing the enormous costs connected with displacement of the 29,116 private microwave facilities in the Commercial 2 GHz Band.

^{14/} Making government spectrum available as a relocation band for displaced fixed microwave users also would drastically minimize the impact of the Commission's reallocation plan. The Federal 2 GHz Band is a more desirable relocation band than the 4 or 6 GHz bands the NPRM proposes because (1) it would be less expensive to move to the adjacent federal government band, and (2) the propagation characteristics of the 1710-1850 MHz and 2200-2290 MHz government bands are more similar to those of the Commercial 2 GHz Band.

^{15/ 5} U.S.C. § 551 et seq.

^{16/ 5} U.S.C. § 706(2)(A).

meet this standard, the FCC is required to scrutinize all reasonable alternatives to its chosen course of action. A court will "look carefully at the Commission's reasoning to ensure that all relevant factors and available alternatives were given adequate consideration in the course of the rulemaking proceedings." Office of Communication of United Church of Christ v. FCC, 707 F.2d 1413, 1426 (D.C. Cir. 1983). 17/

Despite the clear prospect of utilizing the Federal 2 GHz Band for emerging technologies or as a home for displaced 2 GHz users, the Commission appears, thus far, to have failed to make any meaningful attempt to determine the viability of these alternatives. 18/ At a March 26, 1992, ex parte meeting attended by current occupants of the Commercial 2 GHz Band 19/ and senior

^{17/} See also City of Brookings Municipal Telephone Co. v. FCC, 822 F.2d 1153, 1169, n. 46 (D.C. Cir. 1987) ("Commission's duty to consider significant alternatives . . . inheres in the agency's broader responsibility for exercising its expertise in a reasoned manner") citing Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Inc. Co., 463 U.S. 29, 48-49 (1983); NAACP v. FCC, 682 F.2d 993, 998 (D.C. Cir. 1982) (court "will demand that the Commission consider reasonably obvious alternative . . . rules, and explain its reasons for rejecting alternatives in sufficient detail to permit judicial review") (quotation marks and citation omitted); National Citizens Committee for Broadcasting v. FCC, 567 F.2d 1095, 1110-1115 (D.C.Cir. 1977).

^{18/} The Commission indicates that it raised with NTIA the possibility of using the 1710-1850 MHz band as a relocation spot for displaced 2 GHz users "in a preliminary fashion." NPRM at n. 18. However, it is unclear whether contact was made by the Chairman himself or even by any senior staff. In any event, even if the Commission raised the issue of using the federal band as a relocation spot for displaced users, it apparently made no effort to determine the availability of government spectrum as a home for emerging technologies.

^{19/} See Letter from Terry L. Haines, Chief of Staff, Office of the Chairman, dated March 26, 1992, filed with the Secretary (continued...)

Commission staff, $\frac{20}{}$ it became clear that the Commission had made no formal, concerted, high-level effort to discuss with NTIA the availability of federal government spectrum.

This failure to act is particularly striking in light of the comparative underutilization of federal government spectrum as revealed in the NTIA Report. Indeed, the House Committee Report on the federal spectrum reallocation legislation the NPRM cites concluded that "many of the frequencies reserved for government licenses are under-utilized or inefficiently used." In fact, the entire thrust of the pending reallocation legislation is that underutilized government spectrum can -- and should -- be made available for emerging technologies. Accordingly, use of federal government spectrum is a reasonable alternative that the FCC is obligated to fully investigate in this rulemaking proceeding.

D. The FCC and NTIA Have Authority to Reallocate Government Frequencies for Emerging Technologies or for Displaced Users of the Commercial 2 GHz Band

As noted above, the Commission indicated in the NPRM that it did not consider federal government spectrum in its spectrum reserve proposal because that spectrum is under the jurisdiction of NTIA and it is uncertain when government spectrum will be made

^{19/(...}continued)
 of the FCC, pursuant to Section 1.1206 of the Commission's
 Rules, 47 C.F.R. § 1.1206.

^{20/} FCC staff at the meeting included senior advisers to the Commissioners; Thomas Stanley, Chief Engineer; and Robert Pepper, Chief of the Office of Plans and Policy.

<u>See House Comm.</u> on Energy and Commerce, Emerging Telecommunications Technologies Act of 1991, H. Rep. No. 113, 102d Cong., 1st Sess. 14 (June 18, 1991).

available under the Emerging Telecommunications Technologies Act.

NPRM at para. 11, n.11. The FCC, however, has misconstrued the means by which government spectrum can be made available. The proposed legislation would require NTIA, together with the FCC, to identify underutilized government spectrum for reallocation for emerging technologies. But NTIA can release government spectrum without Congressional authorization. In fact, the Communications Act of 1934, as amended ("the Act")²²/ and NTIA's express spectrum policies contemplate release of government spectrum when necessary to meet nongovernment demands for spectrum.

The Act explicitly authorizes the FCC to allocate, assign and regulate the use of all radio frequencies except those specifically reserved for federal government use, which are under the authority of the President. By Executive Order, the President delegated his authority over federal government spectrum to the Secretary of Commerce, making the Secretary "the President's principal adviser on telecommunications policies pertaining to the Nation's economic and technological advancement and to the regulation of the telecommunications industry." 25/

^{22/ 47} U.S.C. § 151 et seq.

^{23/} See generally Sections 151 and 301-303 of the Act. 47
U.S.C. §§ 151, 301-303.

^{24/} Section 305 of the Act gives the President authority to
assign and regulate use of frequencies and radio stations
"belonging to and operated by the United States." 47 U.S.C.
§ 305.

^{25/} Exec. Order No. 12, 406, as amended 3 C.F.R. 158 (1978), reprinted in 47 U.S.C. § 305 app. at 127 (1989); U.S. Department of Commerce, Department Organization Orders 10-10 and 25-7.

NTIA, the office within the Department of Commerce responsible for carrying out this mandate, has interpreted the Executive Order as requiring it to "develop policies in the overall national interest, rather than limiting its scope to the interests of only the federal government agencies." According to the NTIA Manual, the principal document for federal government spectrum management policy, the federal government is required to "make effective, efficient, and prudent use of the radio spectrum in the best interest of the Nation." 27/

In accordance with this policy, NTIA has the flexibility to make federal government spectrum available to the FCC to meet spectrum demands by commercial licensees. NTIA and the FCC are required to engage in cooperative spectrum management and to allocate spectrum between federal and non-federal users in a manner that serves the public interest. According to NTIA:

[T]he Act does not mandate specific allocations of specific bands for specific services or for exclusive federal of nonfederal use; all such allocations stem from agreements made between NTIA and the FCC that result in allocations to various services and classes of user. In other words, there are no statutory "federal" or non-federal" bands. . . NTIA and the FCC manage their particular constituents' uses of the spectrum; however, both must keep in mind the overall public interest . . NTIA cannot be solely the advocate and protector of federal sector use, nor can the FCC be solely the advocate and protector of private sector use. The two must work together for the public good.

Spectrum Report at 17-18.

^{26/ &}quot;U.S. Spectrum Management Policy: Agenda for the Future,"
 NTIA Special Publication 91-23 (Feb. 1991)("Spectrum
 Report") at 17, n. 10.

^{27/} Manual of Regulations and Procedures for Federal Radio Frequency Management, ch. 4 (May 1989 ed., rev. through May 1990) ("NTIA Manual") at § 2-1, n.11 (emphasis added). See NTIA Spectrum Report, supra note 26 at 17-19.

Such shared spectrum management aimed at accommodating spectrum needs of government and commercial users has been employed in the past when the FCC created a spectrum reserve for deployment of new telecommunications services. In the late 1960s, for example, the federal government voluntarily released underutilized frequencies to the FCC for inclusion in a spectrum reserve for land mobile service. 28/

In sum, NTIA has clear authority voluntarily to make federal government spectrum available to the FCC to meet spectrum demands of commercial users. Accordingly, the FCC should take all appropriate steps to utilize government spectrum before it displaces current licensees.

III. CONCLUSION

WHEREFORE, IN VIEW OF THE FOREGOING, the Petitioners respectfully request the Commission to suspend the 2 GHz rulemaking proceeding until: (1) the FCC formally requests NTIA to make available underutilized federal government spectrum for emerging technologies and/or as a new home for displaced 2 GHz users and receives a response to such request; (2) the Office of Engineering and Technology evaluates the Federal 2 GHz Band using the same criteria it applied to the Commercial 2 GHz Band; and (3) interested parties are given an opportunity to file comments on such an OET report on the Federal 2 GHz Band.

<u>28/</u> <u>See</u> "Use of Certain Frequency Band and Operations in Land Mobile Service," <u>Notice of Inquiry and Notice of Proposed Rule Making</u>, 33 Fed. Reg. 10807, para. 2 (1968).

This approach has the potential to conserve valuable agency resources, provide a spectrum reserve for emerging technologies with the least disruptive consequences to existing 2 GHz private microwave licensees and accelerate the timetable for use of that spectrum reserve by eliminating the need for a long transition period.

Respectfully submitted,

THE ASSOCIATION OF AMERICAN RAILROADS

y_____

Thomas J. Keller Erwin G. Krasnow Lawrence R. Sidman Jacqueline R. Kinney

VERNER, LIIPFERT, BERNHARD,
McPHERSON AND HAND, CHARTERED
901 15th Street, N.W., Suite 700
Washington, D.C. 20005
(202) 371-6060

Its Attorneys

LARGE PUBLIC POWER COUNCIL

3y

Thomas J. Keller
Erwin G. Krasnow
Lawrence R. Sidman
Jacqueline R. Kinney

VERNER, LIIPFERT, BERNHARD,
McPHERSON AND HAND, CHARTERED
901 15th Street, N.W., Suite 700
Washington, D.C. 20005
(202) 371-6060

Its Attorneys

AMERICAN PETROLEUM INSTITUTE

Bv

Wayne V. Black
Keller and Heckman
1001 G Street, N.W.
Suite 500 West
Washington, D.C. 20001
(202) 434-4100

Its Attorney

April 10, 1992

CERTIFICATE OF SERVICE

I, Jaime Y.W. Bierds, a secretary for the law firm Verner, Liipfert, Bernhard, McPherson and Hand, Chartered, do hereby certify that a true and correct copy of the foregoing "Petition to Suspend Proceeding" was delivered by hand, this 10th day of April, 1992, to the following:

Chairman Alfred C. Sikes Federal Communications Commission 1919 M Street, N.W., Room 814 Washington, D.C. 20554

Commissioner James H. Quello Federal Communications Commission 1919 M Street, N.W., Room 802 Washington, D.C. 20554

Commissioner Sherrie P. Marshall Federal Communications Commission 1919 M Street, N.W., Room 826 Washington, D.C. 20554

Commissioner Andrew D. Barrett Federal Communications Commission 1919 M Street, N.W., Room 844 Washington, D.C. 20554

Commissioner Ervin S. Duggan Federal Communications Commission 1919 M Street, N.W., Room 832 Washington, D.C. 20554

Ralph Haller, Chief Private Radio Bureau Federal Communications Commission 2025 M Street, N.W., Room 5002 Washington, D.C. 20554

Dr. Thomas P. Stanley, Chief Office of Engineering and Technology Federal Communications Commission 2025 M Street, N.W., Room 7002 Washington, D.C. 20554

Thomas J. Sugrue
Acting Assistant Secretary
National Telecommunications
and Information Administration
Herbert C. Hoover Building
14th Street & Constitution Avenue, N.W.
Washington, D.C. 20230

Jaime Y. Bierds